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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/730,947

12/10/2003

Justin L. Kreuzer

1857.0140002/JDE

6299

26111

7590

06/16/2004

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EXAMINER

CURTIS, CRAIG

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/730,947	KREUZER, JUSTIN L.	
	Examiner	Art Unit	
	Craig Curtis	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/10/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the Applicant regards as his invention.

1. **Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.** More specifically, the meaning of the limitation "...a *variable* wave plate;" (recited in claim 1, line 2; emphasis added) cannot be ascertained. The adjective *variable* renders this phrase and, by extension, the claims indefinite because "a variable wave plate" might reasonably suggest to one of ordinary skill in the art that what is being varied is, for example, the orientation of said wave plate's fast axis with respect to a state of polarization of light incident thereon. Alternatively, such use of the adjective variable could be taken as suggesting that it is in fact the amount of retardation (e.g.,  $\lambda/4$  (i.e., 90° phase retardation),  $\lambda/2$  (i.e., 180° phase retardation, etc.) that is variable.

**With regard to claim 4,** the recitation that said first optical device comprises: a first lens group; a reflective device; and a second lens group is rejected as being incomplete for omitting essential structural cooperative relationships of the recited elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. Recitation of the omitted structural cooperative relationships will make explicit the precise interrelation between the recited first lens

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group, reflective device, and second lens group. **Claims 8, 9, and 12** are also indefinite for omitting essential structural cooperative relationships of the recited elements (a beam directing system, a second optical device; a beam splitter, a reflective device; and a lens group having positive power, respectively).

**With regard to claim 5**, although it is believed that in reciting the limitation "...wherein the first lens group comprises lenses having positive power...." Applicant intended to indicate that said first lens group, as a whole, has a net positive power (read: positive [optical] power), this limitation might also reasonably be interpreted as indicating that said first lens group simply comprises two or more (w/r/t lenses) positive lenses, the power of the first lens group as a whole being either positive or negative. **With regard to claim 6**, please see the comments made above with regard to a similar limitation (cf. negative [optical] power & positive [optical] power).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (5,715,084) in view of Owen et al. (5,593,606).**

**With regard to claim 1**, Takahashi et al. disclose the invention as claimed—an optical system comprising:

a wave plate (4 in Fig. 1);

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a reticle (1 in Fig. 1); and

a first optical device (elements 5 & 6 in Fig. 1),

wherein the reticle is positioned along an axis of a light beam path between a source of the light beam and the first optical device (see Fig. 1), and

wherein the wave plate is positioned along the axis adjacent (read: nearby) the reticle and between the source of light and the first optical device (see Fig. 1)—**EXCEPT FOR** an additional teaching wherein said wave plate is a variable wave plate.

**Owen et al.**, however, disclose a variable wave plate (see 42 in Fig. 1; also see col. 4, ll. 13-19) positioned along an axis of a light beam path between a source of a light beam and a first optical device (id.). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Takahashi et al. such that said wave plate be variable, such a wave plate being explicitly taught by Owen et al., for at least the purpose of enabling a user of said optical system to make adjustments, when necessary, to ensure that the wave plate impart the desired degree of circular polarization to light propagating through said optical system.

**3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (5,715,084) in view of Owen et al. (5,593,606), as applied above to claim 1, and further in view of Zhang et al. (5,952,818).**

The combination discloses the claimed invention as set forth above **EXCEPT FOR** an explicit teaching wherein said variable wave plate is a Berek (N.B. not Berek's) compensator.

**Zhang et al.**, however, explicitly teach the use of a Berek compensator as a variable wave plate. See Fig. 1 (compensator C); also see col. 7, ll. 23-35. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the optical system of the combination such that its variable wave plate be a Berek compensator, Zhang et al. providing an explicit teaching of the use of a Berek compensator as a variable wave plate, for at least the purpose of enabling fine control of the polarization state of light in said optical system.

**4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (5,715,084) in view of Owen et al. (5,593,606), as applied above to claim 1, and further in view of Johnson et al. (4,342,517).**

The combination discloses the claimed invention as set forth above **EXCEPT FOR** an explicit teaching wherein said variable wave plate is a Soleil-Babinet compensator.

**Johnson et al.**, however, explicitly teach the use of a Soleil-Babinet compensator as a variable wave plate. See col. 4, ll. 34-35. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the optical system of the combination such that its variable wave plate be a Soleil-Babinet compensator, Johnson et al. providing an explicit teaching of the use of a Soleil-Babinet as a variable (read: adjustable) wave plate, for at least the purpose of enabling fine control of the polarization state of light in said optical system.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,680,798. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter is sufficiently similar to that claimed in the above-referenced patent that it would have been obvious to one having ordinary skill in the art at the time the application for said patent was filed to have claimed the invention disclosed in the instant invention. For example, compare independent claim 1 in the instant application with independent claim 3 in the above-referenced patent.

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## Contact Information

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Craig Curtis, whose telephone number is (571) 272-2311.

The centralized facsimile phone number for the USPTO is (703) 872-9306.

Any inquiry of a general nature regarding the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'Audrey Chang', with a large, stylized loop at the end.

**Audrey Chang**  
**Primary Examiner**  
**Technology Center 2800**

C.H.C.

Craig H. Curtis  
Group Art Unit 2872  
10 June 2004